
Graphic technology — Communication of offset ink properties

*Technologie graphique — Communication des propriétés de l'encre
offset*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Offset printing inks are special purpose, complex mixtures of chemicals intended to be applied on a substrate by offset printing. They have customized properties and defined drying mechanisms resulting in ink films with standard or customized properties. This document establishes requirements on the communication of offset ink properties, aiming to the optimized planning of printing and to ensure the inks have the appropriate properties for the intended use of the printed products. Examples are the use of alkali resistant inks for combined use with dispersion varnishes to avoid colour changes after printing or the use of higher light fast inks for outdoor applications.

For the printing of food packaging, additional requirements are in continuing development. Often, these are related to the usability of particular substances within the inks. Printers of food packaging are recommended to stay in close contact to their ink suppliers and industry federations and to follow actual developments in this area. Aspects of food safety for food packaging and children toy safety are outside the scope of this document.

Graphic technology — Communication of offset ink properties

1 Scope

This document specifies offset ink related properties which are intended to be communicated between ink supplier and the printer, and which are essential for the optimized print production planning and the intended use of the final product.

NOTE The final product is not necessarily the finished print product.

Aspects related to food safety and other safety requirements like children's toys safety are not part of the scope of this document.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 2836, *Graphic technology — Prints and printing inks — Assessment of resistance of prints to various agents*

ISO 12040, *Graphic technology — Prints and printing inks — Assessment of light fastness using filtered xenon arc light*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

corona treatment

application of an electric discharge on a low surface tension surface in order to increase the surface tension to improve ink wetting and ink adhesion

3.2

ink

composite material containing colourants, functional components, vehicle and additives

Note 1 to entry: The ink is applied as a fluid to a substrate in the offset printing process and setting or drying by either physical (evaporation) and/or chemical (polymerisations e.g. oxidation, radiation induced, or other) processes to form an image for decorative, informative or technical purposes.

3.3

light fastness

resistance of the print to the effects of a specified light source (such as filtered xenon arc light)